Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

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June 10, 2015

Mr. Mike Glinski
Twin Rivers Technologies
Manufacturing Corporation
780 Washington Street
Quincy, MA 02169

RE: QUINCY
Transmittal No.: X264327
Application No.: NE-15-001
Class: *OP*
FMF No.: 230622
AIR QUALITY PLAN APPROVAL

Dear Mr. Glinski:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Air and Waste, has reviewed your Non-major Comprehensive Plan Application ("Application") listed above. This Application concerns the proposed construction, substantial reconstruction, alteration and/or operation to remove an existing wet scrubber (PCD1) and replace it with a new high efficiency regenerative thermal oxidizer (RTO) at your oleo chemicals production facility located at 780 Washington Street in Quincy, Massachusetts ("Facility"). This Application was submitted as a result of the Administrative Consent Order ACOP-NE-12-9007-27, dated February 19, 2013 and subsequently amended on August 15, 2013 (AMEND1), amended on June 16, 2014 (AMEND2), and finally amended on April 30, 2015 (AMEND3). The Application bears the seal and signature of Alicia R. Kabir, Massachusetts Registered Professional Engineer Number 46671.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control" regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-N, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

Twin Rivers Technologies Manufacturing Corporation (the Permittee) is an oleo chemical processing facility, focused on the production and refining of animal fats and oils and the refining of fatty acids and glycerin at the Facility. Emission Unit (EU4) is the closed-loop oleo chemicals production process, from which air emissions are currently vented to two wet scrubber units identified as pollution control device 1(PCD1) and pollution control device 2 (PCD2) which marginally control volatile organic compounds (VOC) and associated odors. The existing PCD1 and PCD2 were approved under Approval MBR-09-IND-015, dated July 1, 2010. The Permittee is required to replace existing PCD1 with a new regenerative thermal oxidizer (RTO-PCD1) to improve capture and control efficiency of VOC laden air stream and associated odors, as a result of Administrative Consent Order ACOP-NE-12-9007-27. The Permittee proposed to add a new carbon adsorption system to the outlet of PCD2.

The Permittee will replace the existing PCD1 with a new regenerative thermal oxidizer (RTO-PCD1) to improve capture and control efficiency of VOC laden air stream and associated odors from EU4. The minimum residence time required in the RTO combustion chamber will be at least 0.5 seconds to achieve a minimum destruction efficiency of 97 percent by weight of VOC. RTO-PCD1 shall be equipped with an automatic control system including operating data acquisition, storage and handling. RTO-PCD1 shall be designed to continuously maintain minimum operating temperature equal to or above 1,450 ^{o}F.

A new centrifugal blower with a rated capacity of at least 8,000 standard cubic feet per minute (scfm) will collect VOC laden air from the collection header which shall maintain a negative pressure in the emission unit capture header serving EU4. RTO-PCD1 will have a minimum rated air flow capacity of 8,000 scfm. RTO-PCD1 will be equipped with a new burner with natural gas as the only fuel of use having a maximum energy input capacity of 1.8 MMBtu/hr.

Under normal operating conditions, the set point of RTO-PCD1 operating temperature shall be at least 1,450 ^{o}F, in order to maintain the minimum operating temperature of 1,450 ^{o}F, or such other temperature as may be established pursuant to satisfactory compliance testing results as determined by MassDEP. The effective chamber volume for each of two beds shall be at least 234 cubic feet per bed, to provide a minimum retention time of 0.5 second at the minimum operating temperature of 1,450^{o}F. Thermocouples shall be located within each of the two combustion chambers. A temperature chart recorder and a data logger shall continuously monitor and record the actual operating temperature of RTO-PCD1.

The new RTO-PCD1 serving EU4 shall achieve a minimum VOC capture efficiency of 100% and minimum overall VOC control efficiency of 97% by weight. RTO-PCD1 will be equipped with a

"puff" chamber to ensure 97% minimum overall control efficiency or a maximum outlet VOC emission rate of 0.15 pounds per hour, whichever is less stringent. This shall be demonstrated through future compliance testing as specified in Table No. 4, Condition No. 2.

EU4 is also controlled by an existing hydrogen scrubber (PCD2) which operates in parallel with the proposed RTO-PCD1 to reduce the risk of hydrogen flashing and also provides marginalVOC and odor control from the gas stream generated from No. 2 PHU hotwell, a "slop stream" of EU 4. PCD2 will not be replaced but it will be enhanced by addition of a new carbon adsorption system (portable carbon canister system which will be identified as PCD2A). The new system is identified as PCD2/PCD2A, which includes the existing and new components. The maximum hot gas input rating from PHU hotwell to PCD2 is 460 acfm at 200 ^{o}F passing from bottom to top of PCD2. The counter current scrubbing water spray is injected at the top of PCD2 to maintain safe operation due to the presence of hydrogen and marginally to entrain odorous light chain hydrocarbons, with a minimum water flow rate of 4-6 gallons per minutes. The VOC and odorous exhaust from PCD2 will instead be captured at high efficiency with a portable carbon canister system to reduce VOC and odors from PCD2 exhaust stream. PCD2 and PCD2A shall provide a VOC capture efficiency of 100% and minimum control efficiency of 95 percent by weight.

2. EMISSION UNIT IDENTIFICATION

Each Emission Unit ("EU") identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1

EU#	EU4 Description	PCD	PCD Description
EU4	Emission Unit Number 4 is the closed loop oleo chemicals production process (air emissions are vented to RTO-PCD1 and PCD2/PCD2A to control VOC and associated odors)	RTO-PCD1	New Regenerative Thermal Oxidizer (RTO) Model MEGTEC Millenium 8,000 or equivalent, 8000 ACFM at 350 ^{o}F
		PCD2/PCD2A	Existing Alloy Fabricator hydrogen scrubber (PCD2) followed by new portable carbon canister system (PCD2A), 460 ACFM at 200 ^{o}F

Table 1 Key:

EU# = Emission Unit Number
PCD2 = Hydrogen scrubber
PCD2A = Portable carbon canister system
RTO-PCD1 = Regenerative Thermal Oxidizer
ACFM = actual cubic feet per minute of VOC and odor containing stream
^{o}F = degrees Fahrenheit

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION AND EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2

EU#	PCD	Air Contaminant	Operational/Emission Limit
EU4	RTO-PCD1	VOC HAP	Natural gas is sole fuel of use for RTO-PCD1 with a maximum heat input rating of 1.8 MMBtu/hr. Air handling systems shall provide a capture efficiency of 100% for RTO-PCD1 and PCD2/PCD2A.* RTO-PCD1 shall provide a minimum combustion temperature of 1,450 ^{o}F and minimum residence time of 0.5 seconds. RTO-PCD1 shall provide a minimum VOC destruction efficiency of 97 percent by weight or a maximum outlet VOC emission rate of 0.15 pounds per hour, whichever is less stringent.
		VOC	0.15 Pounds/hour, 0.62 TPY
		HAP	0.0046 Pounds/hour, 0.02 TPY
	PCD2/ PCD2A	VOC	Nominal 55 gallon portable carbon canister system (PCD2A) shall be replaced quarterly or sooner to avoid breakthrough based on biweekly monitoring during first two replacement cycles. PCD2A shall provide a minimum VOC control efficiency of 95 percent by weight. 0.0046 Pounds/hour, 0.02 TPY

Table 2 Note:
* 100% Capture efficiency based on either USEPA method 204 or a hard piped totally closed exhaust gas capture/collection system.

Table 2 Key:

EU# = Emission Unit Number
PCD = Pollution Control Device
RTO-PCD1 = Regenerative Thermal Oxidizer
PCD2 = Hydrogen scrubber
PCD2A = Portable carbon canister system
VOC = Volatile Organic Compounds
HAP = total Hazardous Air Pollutants.
TPY = tons per consecutive12-month period
MMBtu/hr = million British thermal units per hour
^{o}F = degrees Fahrenheit

The Permittee is subject to, and shall not exceed the Facility-wide Emission Limits as contained in Table 3:

Table 3

EU#	Air Contaminant	Emission Limit	
		TPM	TPY
Facility-wide	NOx	17	204
	CO	2.2	26
	SO_2	60.4	725
	PM_{10}	5.8	69
	VOC	0.3	3.5
	HAP	0.2	1.9

Table 3 Key:

EU# = Emission Unit Number
NO_x = Nitrogen Oxides
CO = Carbon Monoxide
SO_2 = Sulfur Dioxide
PM_{10} = Particulate Matter less than or equal to 10 microns in diameter
VOC = Volatile Organic Compounds
HAP = total Hazardous Air Pollutants.
TPM = tons per month
TPY = tons per consecutive12-month period

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 4, 5, and 6:

Table 4	
EU#	**Monitoring and Testing Requirements**
EU4	1. Monitor raw material usage monthly and a 12-month rolling average in order to determine the actual emissions of VOC and HAP for the prior 11 months for the entire Facility.
	2. Compliance testing shall be completed on RTO-PCD1 and the associated PTEs every three (3) years, or as determined by MassDEP, with the first compliance test commencing within one hundred twenty days (120 days) of commencement of continuous operation of RTO-PCD1. The compliance testing of RTO-PCD1 must demonstrate, at minimum, that: a) each applicable enclosure complies with the United States Environmental Protection Agency's (USEPA) Method 204 which outlines criteria for Permanent Total Enclosures; or b) the actual EU4 capture system complies with the required overall, minimum VOC capture efficiency of 100% (by mass balance justification)*; and c) the VOC destruction efficiency of RTO-PCD1 is a minimum of 97.0 percent by weight or a maximum outlet VOC emission rate of 0.15 pound per hour, whichever is less stringent. The compliance testing procedures must follow USEPA and MassDEP methods and guidelines.
	3. Within thirty (30) days of the continuous operation of the RTO-PCD1, Permittee shall conduct a balancing of the air handling system and measure the air flow within the air handling system to ensure that all of the VOC-laden process air is being vented to the RTO-PCD1. Permittee shall allow MassDEP personnel to witness the demonstration of the capture effectiveness of the air handling system.
	4. For compliance testing purposes, the RTO-PCD1 and its associated EU4 capture system shall be constructed so as to accommodate the emissions testing requirements as stipulated in 40 CFR Part 60, Appendix A. The two (2) inlet and two (2) outlet sampling ports should ideally be located at two duct diameters upstream and eight duct diameters downstream of any flow disturbance. The corresponding sampling ports should be 90 degrees apart from each other.
	5. Monitor operations so that a minimum RTO-PCD1 combustion chamber temperature of 1,450 degrees Fahrenheit, or such other temperature as may be established pursuant to satisfactory compliance testing results as determined by MassDEP, is achieved prior to start-up of RTO-PCD1. This minimum temperature shall be maintained at all times while EU4 and RTO-PCD1 are in operation. Temperature monitoring shall include date and time and any necessary description of operational changes that may occur.
	6. Monitor so that if combustion chamber temperature drops below 1,450 degrees Fahrenheit, an audible alarm shall be activated
	7. Monitor maintenance activities associated with EU4 and RTO-PCD1.
	8. Monitor the monthly and twelve month rolling consumption of natural gas for RTO-PCD1 operation.
	9. Monitor PCD2 operations so that warning-failure shall be indicated by stack temperature audible alarm set at 200 degrees Fahrenheit and minimum water pressure audible alarm set at 15 psig.

Table 4	
EU#	**Monitoring and Testing Requirements**
EU4	10. Monitor performance of portable carbon canister system bi-weekly for the first two replacement cycles after continuous commencement of PCD2A operation to determine whether quarterly (or other) replacement is sufficient to control odor and achieve 95% overall VOC control efficiency.
Facility-wide	11. Monitor Facility operations so that deviations from Plan Approval requirements can be reported to MassDEP.
	12. Monitor Facility operations such that emissions may be calculated as required for compliance with 310 CMR 7.12.

Table 4 Note:

* 100% Capture efficiency based on either USEPA method 204 or a hard piped totally closed exhaust gas capture/collection system.

Table 4 Key:

EU# = Emission Unit Number
RTO-PCD1 = Regenerative Thermal Oxidizer
PCD2 = Hydrogen scrubber
PCD2A = Portable carbon canister system
VOC = Volatile Organic Compounds
HAP = total Hazardous Air Pollutants
PTE = Permanent Total Enclosure

Table 5	
EU#	**Record Keeping Requirements**
EU4	1. Quantify all periods of excess emissions from the RTO-PCD1, even if attributable to an emergency/malfunction, startup/shutdown or equipment cleaning in the determination of annual emissions and compliance with the emission limits as stated in Table 2.

EU4	2. Maintain a record keeping system for RTO-PCD1 and PCD2/PCD2A to be established on-site. All such records shall be maintained up-to-date such that year-to-date information is readily available for MassDEP examination upon request and shall be kept on site for a minimum of five (5) years. Record keeping shall, at a minimum, include: a) Compliance records sufficient to document the actual monthly and twelve month rolling emission rates of VOC from EU4, so as to determine compliance status with the emission limitations contained in Table 2 above. Such records shall include, but are not limited to the monthly and twelve month rolling emission rates, emissions test results, monitoring equipment data and reports, and hours of operation. b) Maintenance: A record of routine maintenance activities performed on EU4 and their monitoring equipment including, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed. c) Malfunctions: A record of all malfunctions that may potentially result in excess emissions of EU4 (including RTO-PCD1 and PCD2/PCD2A) and associated monitoring equipment including, at a minimum: the date and time the malfunction occurred; a description of the malfunction and the corrective action taken; the date and time corrective actions were initiated; and the date and time corrective actions were completed and the equipment was returned to compliance.
	3. Maintain records on-site of the calendar month and twelve month rolling raw materials consumption to document compliance status with the emission limitations contained in Table 2 above.
	4. Maintain records documenting actual RTO-PCD1 combustion chamber temperature in degrees Fahrenheit. Temperature monitoring shall include the date and description of operational deviations. The combustion chamber temperature of the RTO-PCD1 shall be recorded with temperature monitoring and recording equipment using a digital readout and stored on a computerized hard drive, flash card, disc, or other media. Permittee shall have on-site a temperature data back up to the flash card, disc, or other backup data capture media. These records shall be maintained on-site, and shall be made available to MassDEP personnel upon request.
	5. Maintain records of all malfunctions as defined in a SOMP within 60 days of initial startup, as well as historical activation of the interlock system associated with RTO-PCD1, including corrective actions taken and steps to prevent similar malfunctions from reoccurring in the future.
	6. Maintain records of all emission testing for RTO-PCD1.
	7. Maintain a maintenance log for RTO-PCD1 and PCD2/PCD2A which shall record all routine and emergency maintenance work and repairs performed on it, as specified in the SOMP. Said log shall indicate all malfunctions and down time.
	8. Maintain all records of RTO-PCD1 and PCD2/PCD2A operation/malfunction resulting in any associated uncontrolled excess VOC emissions.
	9. Maintain records of monthly and twelve month rolling natural gas and consumption rates and the corresponding actual emissions from these emission units to be included in facility-wide emissions.

EU4	10. Maintain adequate records on-site to demonstrate compliance status with all operational and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html.
	11. Maintain records of monitoring and testing as required by Table 4.
	12. Maintain records of all stack temperature alarms of 200 degrees Fahrenheit or higher and records of all water pressure alarms of 15 psig or lower on PCD2.
	13. Maintain records of portable carbon canister changeovers associated with PCD2A.
	14. Maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU4 and RTO-PCD1 and PCD2/PCD2A approved herein on-site.
Facility-wide	15. Maintain records of all facility operations so that deviations from Plan Approval requirements can be reported to the MassDEP. Maintain a record of all deviations from Plan Approval conditions.
	16. Maintain records of facility operations such that information may be reported as required for compliance with 310 CMR 7.12.
	17. Maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	18. Make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 5 Key:

EU# = Emission Unit Number
RTO-PCD1 = Regenerative Thermal Oxidizer
PCD2 = Hydrogen scrubber
PCD2A = Portable carbon canister system
VOC = Volatile Organic Compounds
SOMP = Standard Operating and Maintenance Procedure
USEPA = United States Environmental Protection Agency

Table 6	
EU#	**Reporting Requirements**
EU4	1. Submit a compliance test protocol on the required initial compliance test to MassDEP's Northeast Regional Office (NERO) for review and approval at least forty-five (45) days prior to the scheduled commencement of said testing. Test protocols for any subsequent required emissions testing shall be submitted for review and approval at least thirty (30) days prior to the scheduled commencement of said testing.
	2. Submit the initial emission test results report to NERO for review within forty-five (45) days of the completion of any required compliance stack testing.
	3. In the event of any RTO-PCD1 malfunction which results in any uncontrolled excess VOC emissions, notify MassDEP by telephone or email within one (1) business day and subsequently in writing within seven (7) days of said occurrence. This written notification shall describe the reason(s) for and the extent of down time of the equipment and all steps that have been or will be taken to prevent similar malfunctions from occurring in the future.
	4. Notify NERO, in writing, within fourteen (14) days of commencement of operation of RTO-PCD1.
	5. Submit the Final Standard Operating and Maintenance Procedures (SOMP) for new EU4 system (RTO-PCD1 and PCD2/PCD2A) to NERO within sixty (60) days of completion of their required initial compliance testing. Any subsequent changes to the SOMP shall be submitted within fifteen (15) days of said revision(s).
	6. Notify MassDEP's NERO, BAW Permit Chief by telephone (978-694-3200), fax (978-694-3499) or email at nero.air@state.ma.us as soon as possible, but no later than one business day after the occurrence of any upsets or malfunctions to EU4 and associated equipment, which results in an excess emission to the air and/or a condition of air pollution.
Facility-wide	7. All notifications and reporting required and not specified by this Approval shall be made to: Department of Environmental Protection/Bureau of Air and Waste 205B Lowell Street Wilmington, Massachusetts 01887 ATTN: BAW Permit Chief Phone: 978-694-3200 Fax: 978-694-3499
	8. Accurately report the Facility's air emissions on Source Registration/Emission Statement Forms as required by Regulation 310 CMR 7.12.
	9. Submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).

Table 6	
EU#	**Reporting Requirements**
Facility-wide	10. Notify MassDEP's NERO, BAW Permit Chief by telephone (978-694-3200), fax (978-694-3499) or email at nero.air@state.ma.us as soon as possible, but no later than three (3) business days after discovery of an exceedance(s) of limitation/restriction established within this Final Approval. A written report shall be submitted to Permit Chief at MassDEP within seven (7) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).

Table 6 Key:

EU# = Emission Unit Number
BAW = Bureau of Air and Waste

4. SPECIAL TERMS AND CONDITIONS

A. The Permittee is subject to, and shall comply with, the Special Terms and Conditions as contained in Table 7 below:

Table 7	
EU#	**Special Terms and Conditions**
EU4	1. Establish and maintain documentation and adhere to the criteria for VOC capture efficiency - U.S. EPA Method 204 for permanent total enclosures (PTEs) for these emission units or utilize a hard piped totally closed exhaust gas capture/collection system. The criteria for a PTE are the following: a) All access doors and windows are closed during normal operation. b) The interior of the PTE is under negative pressure to the outside environment. c) The average velocity through the natural draft openings (NDOs) must be greater than 200 feet per minute. d) Sources of VOC in the PTE must be at least four (4) equivalent diameters from each NDO. e) The total area of all NDOs must be less than five (5) percent of the total area of the enclosure. The above procedures shall be incorporated into Permittee's Standard Operating and Maintenance Procedure (SOMP) for these emission units.*

Table 7

EU#	Special Terms and Conditions
EU4	2. Establish and maintain a copy of the full PTE site-specific test plan on-site or utilize a hard piped totally closed exhaust gas capture/collection system. The test plan should contain the following: a) A description of how Permittee will demonstrate that, within the PTE, the VOC and HAP concentrations shall be maintained and not rise or exceed safe Occupational Safety & Health Administration (OSHA) levels. Method 204 lists the requirements for such levels; b) A full explanation of any possible natural draft openings (NDOs) and how they might affect the overall certification of the PTE; c) A description of how Permittee will monitor to verify that the PTE will meet either inward flow to the PTE or negative pressure in the PTE; and d) A calculation of the PTE area ratios as required in Method 204. This plan shall be made available to MassDEP personnel upon request.
	3. Maintain documentation on the actual VOC capture efficiency of RTO-PCD1 based on the most recently performed compliance test or utilize a hard piped totally closed exhaust gas capture/collection system.
	4. Operate the subject RTO-PCD1 and PCD2/PCD2A consistent with the Final SOMP and the conditions/parameters established from each compliance test.
	5. RTO-PCD1 shall provide a minimum control efficiency of 97.0 weight percent for VOC or a maximum outlet VOC emission rate of less than 0.15 pound per hour, whichever is less stringent. All associated permanent total enclosures (PTEs) shall provide 100 percent capture efficiency based on conformance to Method 204.
	6. A copy of the Standard Operating and Maintenance Procedure (SOMP) for RTO-PCD1 and PCD2/PCD2A shall be located at or nearby each associated system's control panel.
	7. The start-up specifications and maintenance procedures for RTO-PCD1 and PCD2/PCD2A shall be established and incorporated into their SOMP. The SOMP shall address the spare parts inventory and back-up equipment systems for the RTO-PCD1 and PCD2/PCD2A to prevent or reduce any downtime for RTO-PCD1 and PCD2/PCD2A. In addition, a copy of any subsequent revisions made to the SOMP must be submitted to this office within seven (7) days of the documented modification(s).
	8. An electronic interlock system shall prevent the operation of RTO-PCD1, until the RTO-PCD1 achieves and maintains the minimum operating temperature of 1,450^{o}F (or such other temperature as may be established pursuant to satisfactory compliance testing results as determined by MassDEP). Emission venting to the RTO-PCD1 due to filling processes and any manufacturing processes shall be terminated should the RTO-PCD1 fail to operate within the permitted operating temperatures defined in this Approval. In the event of RTO-PCD1 interlock activation, Permittee shall take necessary actions to prevent release of air emissions from the connected tanks and ensure safe conditions until RTO-PCD1 operation is once again restored. The SOMP shall address these fail-safe contingency actions to ensure safe and reliable operating of the system.
	9. The Permittee shall conduct a weekly odor survey to minimize the fugitive emissions and odors from closed loop EU4 system and also when transferring raw materials from heated rail cars to EU4 and maintain a fugitive emissions capture plan to seal and secure all such fugitive emissions points which results in odor.

Table 7	
EU#	**Special Terms and Conditions**
EU4	10. There are (5) upset conditions for which venting of the associated emission unit EU4 being controlled by RTO-PCD1 shall immediately be shut down. These conditions are as follows: a) thermal oxidizer fan failure; b) thermal oxidizer combustion chamber exceeding 1950 ^{o}F or manufacturer's specification; c) any pertinent hydraulic system (i.e. pumps, etc.) pressure loss; d) loss of burner gas pressure, gas service interruption, or flame out; and/or e) general system or RTO-PCD1 power failure.
Facility-wide	11. This Plan Approval, NE-15-001, supersedes the Final Approval, MBR-09-IND-015, issued to the Permittee on July 1, 2010, in its entirety.

Table 7 Note:

* 100% Capture efficiency based on either USEPA method 204 or a hard piped totally closed exhaust gas capture/collection system.

Table 7 Key:

EU# = Emission Unit Number
RTO-PCD1 = Regenerative Thermal Oxidizer
PCD2A = Hydrogen scrubber and carbon canister system
VOC = Volatile Organic Compounds
HAP = total Hazardous Air Pollutants

B. The Permittee shall install and use an exhaust stack, as required in Table 8, on RTO-PCD1 and re-use the existing stack on PCD2/PCD2A, that are consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as "shanty caps" and "egg beaters." The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 8 below, for the Emission Units that are regulated by this Plan Approval:

Table 8					
EU#	**PCD**	**Stack Height Above Roof (feet)**	**Stack Inside Exit Dimensions (feet)**	**Stack Gas Exit Velocity Range (feet per second)**	**Stack Gas Exit Temperature Range (^{o}F)**
EU4	RTO-PCD1	35	2.30	45	300 – 600
	PCD2/PCD2A	15	0.25	100	90 -200

Table 8 Key:

EU# = Emission Unit Number
PCD = Pollution Control Device
^{o}F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).

B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.

C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.

F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.

G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.

H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.

I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Dhiraj Desai by telephone at978-694-3282, or in writing at the letterhead address.

Dhiraj Desai
Environmental Engineer

Susan P. Ruch
Acting Permit Chief and Deputy Regional Director
Bureau of Air and Waste

Enclosure

ecc: Board of Health, 1120 Hancock Street, Quincy, MA 02169
Fire Department, 26 Quincy Avenue, Quincy, MA 02169
MassDEP/Boston (e-Copy) - Y. Tian
MassDEP/NERO (e-Copy) - M. Altobelli, E. Braczyk
MassDEP/NERO (Hard Copy) - M. Persky, D. Desai
ERM, One Beacon Street, 5th Floor, Boston, MA 02108, Attn: Bob Fraser